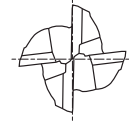


CARBIDE, 4 FLUTE SHORT

- ▶ Special flute geometry and multiple helix eliminate vibrations
- ▶ Excellent performance for Stainless Steels, Mild Steels, Cast Iron, Low/Medium hardness materials under HRc40



GMF52 / PLAIN SHANK

GMF53 / FLAT SHANK



P.12~13

MILL DIA. TOLERANCE (mm)	SHANK DIA. TOLERANCE
0~-0.03	h6

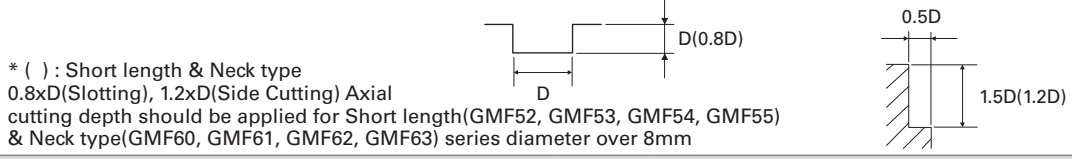
Unit : mm

EDP No.		MILL DIAMETER	SHANK DIAMETER	LENGTH OF CUT	OVERALL LENGTH	CHAMFER
PLAIN	FLAT					
GMF52030	GMF53030	3.0	6	7	54	0.10
GMF52040	GMF53040	4.0	6	8	54	0.15
GMF52050	GMF53050	5.0	6	10	54	0.15
GMF52060	GMF53060	6.0	6	10	54	0.20
GMF52080	GMF53080	8.0	8	12	58	0.20
GMF52100	GMF53100	10.0	10	14	66	0.30
GMF52120	GMF53120	12.0	12	16	73	0.35
GMF52140	GMF53140	14.0	14	18	75	0.40
GMF52160	GMF53160	16.0	16	22	82	0.40
GMF52180	GMF53180	18.0	18	24	84	0.50
GMF52200	GMF53200	20.0	20	26	92	0.50

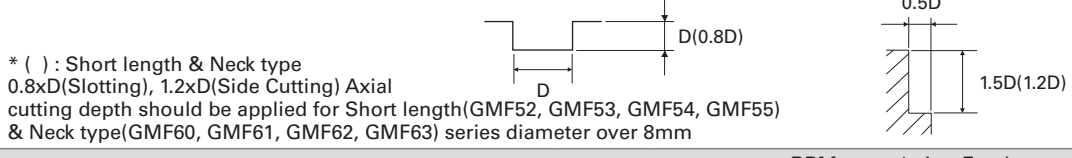
CUTTING CONDITION

Y7 Plus
SOLID CARBIDE END MILLS

MATERIAL	P											
	CARBON STEEL 1.1191(C45) 1.0726(35 S 20) 1.0715(9 SMn 28) 1.0718(9 SMnPb 28)				ALLOY STEEL 1.2330(35 CrMo 4) 1.6565(40NiCrMo6) 1.7033(34Cr4) 1.6523(2 NiCrMo2)				TOOL STEEL 1.2363(X100 CrMoV 5 1) 1.2379(X 155 CrV Mo 12 1) 1.2344(X 40 CrMoV 5 1) 1.3243(S 6-5-2-5)			
HARDNESS	~ HB 300				HB 300 ~ HB 380				~ HB 380			
STRENGTH	~ 1000N/mm ²				1000N/mm ² ~ 1300N/mm ²				~ 1300N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
3.0	16170	330	152	0.005	11315	230	107	0.005	6790	95	64	0.003
4.0	12125	395	152	0.008	8485	275	107	0.008	5090	115	64	0.006
5.0	9700	445	152	0.011	6790	310	107	0.011	4075	130	64	0.008
6.0	8080	520	152	0.016	5655	365	107	0.016	3395	150	64	0.011
8.0	6060	665	152	0.027	4240	460	107	0.027	2545	190	64	0.019
10.0	5345	820	168	0.038	3740	575	117	0.038	2240	240	70	0.027
12.0	4450	835	168	0.047	3100	580	117	0.047	1860	240	70	0.032
14.0	3815	745	168	0.049	2670	520	117	0.049	1600	215	70	0.034
16.0	3340	710	168	0.053	2330	490	117	0.053	1400	205	70	0.037
18.0	2970	700	168	0.059	2075	490	117	0.059	1245	205	70	0.041
20.0	2670	695	168	0.065	1870	485	117	0.065	1120	200	70	0.045
25.0	2140	550	168	0.064	1495	380	117	0.064	895	160	70	0.045

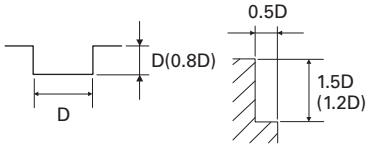
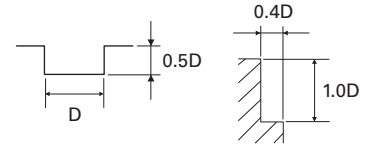
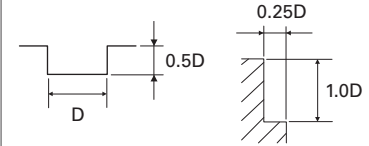


MATERIAL	K				M							
	CAST IRON 0.6020(GG20) 0.8145(GTS-45-06) 0.7060(GGG-60)				STAINLESS STEELS 300 1.4301(X 5 CrNi 18 9) 1.4436(X 5 CrNiMo 17 13 3) 1.4306(X2CrNi18 9) 1.4435(X2 CrNiMo18 14 3)				STAINLESS STEELS 400 1.4005(X12CrS 13) 1.4104(X12CrMoS17)			
HARDNESS	~ HB 260											
STRENGTH	~ 870N/mm ²											
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
3.0	11880	300	112	0.006	11205	210	106	0.005	15690	225	148	0.004
4.0	8910	360	112	0.010	8400	275	106	0.008	11740	280	148	0.006
5.0	7130	405	112	0.014	6725	340	106	0.013	9405	340	148	0.009
6.0	5940	480	112	0.020	5605	395	106	0.018	7845	395	148	0.013
8.0	4455	600	112	0.034	4205	475	106	0.028	5880	510	148	0.022
10.0	3930	755	123	0.048	3365	645	106	0.048	4705	640	148	0.034
12.0	3255	760	123	0.058	2800	620	106	0.055	3925	620	148	0.039
14.0	2805	680	123	0.061	2400	570	106	0.059	3365	570	148	0.042
16.0	2450	640	123	0.065	2105	525	106	0.062	2940	525	148	0.045
18.0	2180	640	123	0.073	1870	520	106	0.070	2615	520	148	0.050
20.0	1965	635	123	0.081	1680	515	106	0.077	2355	515	148	0.055
25.0	1570	495	123	0.079	1345	415	106	0.077	1885	415	148	0.055



RPM = rev./min., Feed = mm/min.
Vc = m/min., fz = mm/tooth

CUTTING CONDITION

MATERIAL	M				S							
	STAINLESS STEELS (PH) 1.4545(Z7 CNU15.05)				TITANIUM Ti6Al4V Ti5Al5V5Mo Ti7Al4Mo				HIGH TEMPERATURE ALLOY INCONEL HASTELLOY RENE			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
3.0	10085	185	95	0.005	6165	100	58	0.004	2805	35	26	0.003
4.0	7560	245	95	0.008	4620	135	58	0.007	2100	45	26	0.005
5.0	6055	305	95	0.013	3700	165	58	0.011	1685	55	26	0.008
6.0	5045	355	95	0.018	3085	195	58	0.016	1405	65	26	0.012
8.0	3785	425	95	0.028	2315	235	58	0.025	1050	80	26	0.019
10.0	3030	580	95	0.048	1855	315	58	0.042	840	110	26	0.033
12.0	2520	555	95	0.055	1540	305	58	0.050	700	105	26	0.038
14.0	2160	510	95	0.059	1320	280	58	0.053	600	95	26	0.040
16.0	1895	470	95	0.062	1160	255	58	0.055	525	90	26	0.043
18.0	1685	465	95	0.069	1030	255	58	0.062	465	90	26	0.048
20.0	1515	460	95	0.076	925	250	58	0.068	420	90	26	0.054
25.0	1215	370	95	0.076	740	205	58	0.069	335	70	26	0.052
												

RPM = rev./min.
Feed = mm/min.
Vc = m/min.
fz = mm/tooth